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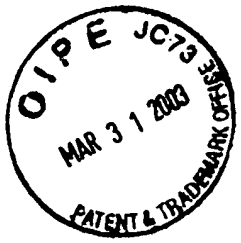


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

SIVAVEC et al. Group Art Unit: 3673

Application No.: 09/682,142 Examiner: Katherine W. Mitchell

Filed: July 26, 2001

For: PERMEABLE-REACTIVE BARRIER MONITORING METHOD AND SYSTEM

REQUEST FOR RECONSIDERATION

Assistant Commissioner for Patents
Box Non-Fee Amendment
Washington, D. C. 20231

Sir:

Claims 1 to 35 and 44 to 66 are pending. The March 11, 2003 Office Action rejects claims 1 to 35 and 44 to 66. Reconsideration is respectfully requested for the following reasons:

Claims 1 to 35 and 44 to 66 were rejected under 35 U.S.C. §103(a) over the PRB paper(s) and Misquitta and claims 1 to 35 and 44 to 66 were rejected under 35 U.S.C. §103(a) over the Corps of Engineers paper(s) and Misquitta. Claims 1 to 35 claims a method that includes "in-well transmitting" a signal "by a wireless communication"; claims 44 to 65 claim "a transmitter associated with" an in-well sensor "to wirelessly transmit a signal." Applicants' February 13, 2003 Amendment states that the rejections are based on improper combinations of references, and further, even improperly combined, the references do not establish a prima facie case of obviousness.

A. Improper Combinations of References

The PRB paper(s) and the Corps of Engineers paper(s) relate to a "Permeable Reactive Barrier" (PRB) method. A PRB method is a passive method that depends upon

"natural groundwater flow" for effectiveness. Applicants' specification paragraph [0004] points out:

> A PRB is designed to provide a set residence time for decontamination of the contaminated plume. The PRB design is determined by the concentration of contaminants, *the natural groundwater flow* and the degradation rate for the contaminants in the presence of the PRB reactive material. A wide variety of chlorinated hydrocarbons, including chlorinated ethenes such as trichloroethene (TCE) and tetrachloroethene (PCE) and their products, dichloroethene (DCE) and vinyl chloride (VC), are effectively treated by this method, often at a significant cost savings when compared to conventional pump-and-treat alternatives. (Emphasis added.)

The Misquitta reference relates to a "Pump-and-Treat" groundwater recovery system. In contrast to a passive, natural ground water flow PRB method, a "Pump and Treat" method disrupts natural groundwater flow by diverting ground water to the surface for treatment. A reference that teaches a disruptive pump and treat method is not "reasonably pertinent" to a passive, natural flow method. The references are not analogous art. See *In re Clay*, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992).

In its March 11, 2003 Office Action, the PTO responds that "[g]roundwater treatment monitoring systems would be a logical area to investigate options for groundwater treatment monitoring systems." But this is not the question to determine analogous art. As *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) states "[a] reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem" (emphasis added). Hence, the question is not whether another art area would be an area "to investigate options." Rather, the questions is whether a disruptive pump and treat method (Misquitta et al.) would have logically commended itself to an inventor's attention in considering a problem presented in passive, natural flow treatment (PRB) that requires the opposite – non-disruptive treatment.

Applicants are not contending that the PTO is "combining two treatment methods" and Applicants recognize that both "Pump and Treat" and "Permeable Reactive

Barrier" treatments are ground water treatment systems. However, while both types of methodology include "groundwater treatment monitoring systems," it remains that the systems are diametrically opposed systems in theory and practice and that one would not have commended itself to an inventor's attention in considering his problem" in the other. Relying on *In re Clay, supra*, Applicants are arguing that the PTO has failed to establish why one skilled in the art would have been led to combine a passive, natural flow treatment (PRB) teaching with a disruptive 'Pump and Treat' method teaching. Unless the PTO addresses this question, the combination rejections should be withdrawn.

Second, to support a rejection based on a combination of references, "[t]he PTO "must not only assure that... requisite findings are made, based on evidence of record, but must also *explain the reasoning by which the findings are deemed to support the agency's conclusion*" (emphasis added). *In re Lee*, 61 USPQ 2d 1430, 1434, 277 F.3d 1338, _____ (Fed. Cir. 2002).

The March 11, 2003 Office Action argues that "Misquitta specifies that automation is a benefit for remediation projects in col. 1 lines 40-42, and examiner notes that costs for labor and manpower are a factor always considered in long-term projects, especially when the site is likely to be remote and hazardous, as contaminated sites usually are, as disclosed in col 8 lines 25-29." Applicants fail to understand this argument. The question is what is the reasoned logic to lead one skilled in the passive reactive barrier art to a "wireless" teaching in the Pump and Treat art. While automatic sampling might be "automation," a question of "wireless" is not. Nor are costs for labor and manpower considerations relatable to "wireless."

The PTO argues:

> In this case, examiner is using Misquitta, a method and system of monitoring groundwater treatment, for the specifics of the monitoring method. How Misquitta remediated the groundwater is not applied to the applicant's claims or the primary references, and examiner is not combining two treatment methods, but a monitoring system of a groundwater treatment system with a groundwater treatment system. Groundwater treatment monitoring systems would be a logical area to investigate options for groundwater treatment monitoring systems.

Office Action page 11, lines 7 to 12.

Applicants are aware that the PTO is relying on Misquitta "for the specifics of the monitoring method," i.e., "wireless communication to a remote collector or monitor," (claim 1), not to combine "two treatment methods." But this is precisely what is incorrect in the PTO's examination. Unless the PTO establishes the reasoned logic that would have led one skilled in the passive reactive barrier art to a "wireless" teaching in the "Pump and Treat" art, the rejection is only an improper selective picking and choosing of features in a secondary reference, without any basis in the references for doing so. The rejection is supportable only through hindsight and should be withdrawn. See *In re Deuel*, 34 USPQ2d 1210, 1215 (Fed. Cir. 1995).

The PTO states:

> Groundwater treatment monitoring systems would be a logical area to investigate options for groundwater treatment monitoring systems.

Office Action page 11, lines 12 to 14.

The statement does not address the logic required to combine references. The PTO reasoning is based on an improper and unsupported expanded definition of the relevant art. The PTO argument taken to its full extent would be that technology is "a logical area to investigate options" for a technology "monitoring system." There is no teaching or suggest in the prior art that any Misquitta "wireless" teaching has application to "groundwater treatment monitoring systems" other than "pump and treat." If the PTO disagrees, the PTO is respectfully requested to point out where the teaching appears. "[W]hen the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the reference...." *In re Rijckaert*, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) The relevant art is not groundwater treatment but is "passive reactive barrier" treatment. A disruptive 'Pump and Treat' method is not reasonably pertinent to a PRB natural flow treatment. The question remains; what is the reasoned logic that would have led one skilled in the PRB art to a "wireless" teaching in the "Pump and Treat" art.

In Section 6 of the Office Action, the PTO acknowledges that "obviousness can

only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *See In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992)." The PTO argues, however:

> Misquitta specifies that automation is a benefit for remediation projects in col 2 lines 40-42, and examiner notes that costs for labor and manpower are a factor always considered in long-term projects, especially when the site is likely to be remote and hazardous, as contaminated sites usually are, as disclosed in col 8 lines 25-29.

Office Action page 12, section 7.

This argument is incorrect.

First, the PTO incorrectly characterizes the Misquitta teaching. Misquitta does not "specif[y] that automation is a benefit for remediation projects." At col. 2, lines 40 to 42, Misquitta teaches that "[i]t is a further object of the present invention to provide automated long-term monitoring of remediation performance." This is a statement of an object of the Misquitta pump and treat invention; not a statement that "automation is a benefit for remediation projects."

Second, where is "costs for labor and manpower are... always considered in long-term projects" taught in the art? MPEP §2144.03 provides that "[i]f the applicant traverses such an assertion the examiner should cite a reference in support of his or her position." Applicants traverse the statement that "costs for labor and manpower are... always considered in long-term projects" and demand citation of a reference or withdrawal of the combination rejections. Similarly Applicants traverse the statement that this is true "especially when the site is likely to be remote and hazardous, as contaminated sites usually are" and demand citation of a reference or withdrawal of the combination rejections.

Third even incorrectly assuming that the art teaches that (1) "automation is a benefit for remediation projects" and (2) "costs for labor and manpower are a factor

always considered in long-term projects, especially when the site is likely to be remote and hazardous, as contaminated sites usually are," what is the relevance of these teachings to the question of combining references? The invention does not address need for "automation" and does not respond to "costs for labor and manpower" considerations. The invention provides a "wireless communication" to preserve passivity of a PRB treatment. Why would "automation" or "labor and manpower" factors have led one skilled in the art to apply a feature of a disruptive 'Pump and Treat' method to a PRB natural flow treatment?

The Office Action fails to explain the reasoning of why one skilled in the natural water flow PRB art would have been led to combine a teaching from a disruptive "Pump and Treat" art. The rejections under 35 U.S.C. §103(a) over the PRB paper(s) and Misquitta and the Corps of Engineers paper(s) and Misquitta should be withdrawn.

B. No *prima facie* Case.

Further even improperly combined, the references do not establish a prima facie case of obviousness of "in-well" "wireless communications," claims 1 to 43 or of "a transmitter associated with the sensor in well to wirelessly transmit a signal," claims 44 to 65. The Office Action at page 7 states that "A transmitter... and the method of monitoring and transmitting" is [sic] taught in Misquitta in col. 6 lines 47-60 and col. 7 lines 7-21." Applicants have carefully reviewed Misquitta. While Misquitta discloses a monitor that transmits a signal, the signal is transmitted by wire not "wirelessly." See Misquitta col. 8, lines 41 to 50.

"A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art...." In re Rijckaert, 28 USPQ2d 1955, 1956 (Fed. Cir. 1992). The PRB paper(s), the Corps of Engineers paper(s) and Misquitta do not teach or suggest "in-well" "wireless communications" (claims 1 to 43) or "a transmitter associated with the sensor in well to wirelessly transmit a signal" (claims 44 to 65). "If examination... does not produce a prima facie case of unpatentability, then without more the applicant is entitled to grant of the patent." *In re Oetiker*, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

"When the reference cited by the examiner fail to establish a prima facie case of obviousness, the rejection is improper and will be overturned." *In re Deuel*, 34 USPQ2d 1210, 1214 (Fed. Cir. 1995).

In response to Applicants' argument, the PTO states:

Examiner has specifically quoted Misquitta's in-well monitoring and wireless transmission. The fact that additional embodiments are disclosed is irrelevant.

Office Action section 7, page 12.

Applicants believe that the PTO is referring to the Office Action page 2 statement that "Misquitta teaches in-well monitoring and wireless transmission to a remote collector or monitor in Figs 5 and 10 and col 6 lines 47-60." Again, Applicants have carefully examined the indicated Misquitta reference but are unable to find any teaching or suggestion of "in-well transmitting... by wireless communication" (claim 1, emphasis added). In its entirety, Misquitta col. 6, lines 47 to 60 states:

> Monitoring device 510 is placed within monitoring well 400 to measure conditions within that well. Such information may, for example, represent groundwater parameters such as the groundwater level or contaminant concentration located within the monitoring well. The information is transmitted as condition signal 410 to monitor converter 520 which converts condition signal 410 into digital signal 530. Computer controller 540 receives digital signal 530, and, in response to that signal, transmits flow signal 550 to flow converter 560, which converts flow signal 550 into control signal 430. Control signal 430 is transmitted to pump 570 located in groundwater extraction well 110 and varies the pumping rate of pump 570. Line 580 indicates the groundwater level in the aquifer.

And, the Figs. 5 and 10 show connections, not "wireless" from the sensors.

"[W]hen the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the reference...." In re Rijckaert, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). Where in this text or in Figs. 5 and 10 is there any teaching or suggestion of "in-well transmitting... by wireless communication" (emphasis added)? Where in this text or in Figs. 5 and 10 is there any teaching or suggestion of claim "a transmitter associated with" an in-well sensor "to wirelessly transmit a signal" (emphasis added)? The PTO is respectfully

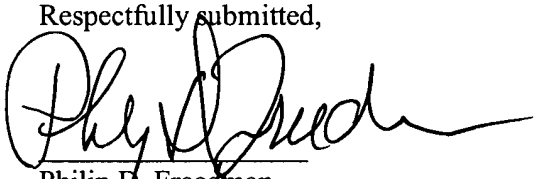
requested to identify the text of Misquitta that teaches or suggests "in-well transmitting... by wireless communication" in a further Office Action restarting the period for response or withdraw the rejections.

The references do not establish a prima facie of obviousness of claims 1 to 35 and 44 to 66. The rejections under 35 U.S.C. 103 should be withdrawn.

In view of the foregoing amendments and remarks, it is respectfully submitted that claims 1 to 35 and 44 to 66 are allowable. Reconsideration and allowance are requested.

Should the Examiner believe that any further action is necessary in order to place this application in condition for allowance, she is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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